



# OPERATING INSTRUCTIONS

## ***MOISTURE-TEMP CABINETS***



**MTU SERIES**

**MT SERIES**

# MOISTURE-TEMP CABINETS

*Hold any kind of food fresh, hot and ready to serve, longer than ever before!*

## MTU-12L

Shown with optional Lexan door, full bumper and push handles



## MT-1826-7

Shown with optional full bumper and push handles



## MTU-12D

Shown with optional full bumper and push handles



## CONGRATULATIONS...

...and thank you for purchasing an FWE Mobile MOISTURE-TEMP cabinet. Your unit has been designed and manufactured under rigid controls to assure you the most efficient service. It is a full time unit, and may be used continuously.

Please take a moment to read through this booklet of important information pertaining to your cabinet. By following a routine of proper use and care described on the following pages, your cabinet will last for many years.

**IMPORTANT:** Your **Manufacturer Registration Card** must be returned within 30 days after initial delivery to put warranty into effect.

## MODEL NUMBERS

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### Universal Series



MTU-4



MTU-10



MTU-12



MTU-12D

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### Standard Series



MT-1826-7



MT-1826-15



MT-1826-18

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IMPORTANT: Your FWE MOISTURE-TEMP is designed to give maximum performance by using the **heat control** and the **air moisture control** *simultaneously*. To achieve the desired results for various products, it is suggested that you experiment with various settings.

Please see the GENERAL OPERATING INSTRUCTIONS for several examples of simultaneous control settings, resulting in relative humidity.

**CAUTION: HOLDING FOOD AT TEMPERATURES OF LESS THAN 140°F MAY BE DANGEROUS. TEMPERATURES UNDER 140°F PROMOTE THE GROWTH OF HARMFUL BACTERIA AND TOXINS IN SOME FOODS.**

### ***SERIAL AND MODEL NUMBER***

These numbers are found on the nameplate (serial tag) affixed to the lower back of the unit. Please record them in this booklet, in the space provided on page 13. When ordering parts and/or service, you will need to provide this information. The voltage and amperage of the unit are also stamped on the serial tag.

### ***UNPACKING***

After uncrating your cabinet, remove all tape and padding which held all doors, shelves, racks, cord, etc., in place during shipment.

### ***ELECTRICAL REQUIREMENTS AND GROUNDING***

FWE MOISTURE-TEMP models operate on 110/120 volt, 60 Hz, 1 ph, A.C. (unless ordered otherwise), and are equipped with a three prong grounding cord plug for your protection against possible shock hazards. Be sure to plug only into a properly grounded three prong wall receptacle. If you have any questions with regard to adequate wiring or grounding in your building, a qualified electrician should be contacted before using your cabinet. The amperage of your cabinet is stamped on the name plate attached to the unit.

**DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE GROUNDING PRONG FROM THE CORD PLUG.**

**WARNING: ONLY A QUALIFIED ELECTRICIAN SHOULD ATTEMPT TO REPAIR OR REPLACE ELECTRICAL COMPONENTS OR WIRING.**

**BE SURE THAT MODEL IS UNPLUGGED FROM ELECTRICAL SOURCE BEFORE REMOVING CONTROL PANEL.**

## ***CLEANING***

Keep your cabinet clean by simply wiping the interior and exterior, as needed, with a damp cloth or sponge and a mild soapy solution. **NEVER USE ABRASIVES, ACIDS, OR STRONG CLEANERS.** Do not flood or allow electrical parts to become wet. The interior tray slide assemblies and humidifier pans are removable for easy cleaning. A stainless steel cleaner/polish is recommended for the exterior to maintain a "like-new" appearance. **DO NOT USE WAX OR STRONG CLEANERS ON DOOR GASKETS OR VINYL TRIM.**

**WARNING:** THE WATER PAN, AIR TUNNEL AND HEATING ELEMENT(S) ARE HOT WHEN IN USE AND COULD CAUSE INJURY. NEVER TOUCH, OR ATTEMPT TO LIFT HEATING ELEMENTS BY HAND! A THUMB LEVER IS PROVIDED TO POSITION YOUR HINGED ELEMENTS AND FAN GRILL.

## ***CONTROLS***

A rectangular, red indicator light tells you when your cabinet is plugged into a power source. When ready for operation, an ON-OFF rocker switch activates power to the cabinet. Your MOISTURE-TEMP is equipped with two (2) heating elements and two (2) separate controls which regulate these elements. This allows you to set the exact temperature and humidity needed for the product you are holding. The air moisture knob is an infinite control (1-10 settings) which regulates the amount of humidity in the cabinet. A white light indicates that this function is activated. The air temperature control goes from 90°F to 190°F, and controls the amount of heat in the cabinet. (If water is added to water pan during this mode, some humidity will be added to the cabinet air to keep foods moist. However, if dry heat is needed, it does not harm the cabinet to be used without any water in the water pan). An amber light indicates that the holding function is activated. An operational range thermometer shows the actual internal temperature of the cabinet. NOTE: Some units are equipped with an optional accessory timer, which may be set manually for up to 12 hours.

# **GENERAL OPERATING INSTRUCTIONS**

## **Filling the humidifier pan and pre-heating**

1) PLUG CABINET INTO OUTLET, making sure it is a properly grounded power receptacle. Press ON-OFF rocker switch to "ON" position. The red indicating light will come on, and remain on until the rocker switch is turned to "OFF" position.

2) FILL THE HUMIDIFIER PAN WITH HOT WATER. This pan is located on the inside bottom of the unit. The entire pan is removable for ease in cleaning and filling. Fill this pan with HOT water prior to heating the cabinet. This will allow the heating system to condition and add humidity to the cabinet's air and help prevent your food from drying out and shrinking. NOTE; If dry heat is desired (no humidity), simply drain the water out of the pan.

3) PRE-HEAT THE CABINET by turning the rocker switch to the "ON" position, and setting the air temperature to 100°F. Allow approximately 15-25 minutes of pre-heat time. The door should be kept tightly closed during this procedure, to obtain the optimum environment.

### **AVOID PUTTING YOUR HOT FOODS INTO A COLD CABINET!**

By pre-heating the unit 20-30 minutes before each use, you can be assured of maintaining the temperature and obtaining the best results from your cabinet. When the amber light goes off, the unit has reached temperature, and is ready to load with your HOT foods. NOTE: the amber "heat" light goes on and off as the "Heat" element cycles on and off.

4) SET AIR MOISTURE CONTROL to desired setting. The white indicator light will illuminate, and remain on for the duration of the cycle. Suggested setting is NO. 5, for uniform results. At this setting, the Moisture-Temp System maintains an optimum 95°- 95% heat / humidity balance.

# **GENERAL OPERATING INSTRUCTIONS**

## **Setting the air temperature and air moisture**

Below are examples of results at several temperature / moisture setting combinations. As a rule of thumb, **the higher the heat setting, the lower the humidity**, since higher temperatures will cause more rapid evaporation of the moisture.

EXAMPLE: If temperature setting is at **100°F**, and moisture setting is at #5, it should result in **96% relative humidity** in the interior of the cabinet.

EXAMPLE: If temperature setting is at **140°F**, and moisture setting is at #5, it should result in **90% relative humidity** in the interior of the cabinet.

EXAMPLE: If temperature setting is at **152°F**, and moisture setting is at #5, it should result in **75% relative humidity** in the interior of the cabinet.

NOTE: As with all holding cabinets, your results may vary, depending on cabinet model (size of interior), room temperature and conditions, pre-heat time, temperature of product going into cabinet, etc... It is suggested that you experiment with various products at various settings to achieve optimum, uniform results for your particular application.

5) **LOAD THE CABINET** with your product as quickly as possible. To maintain the best conditions, the door should be tightly closed when not loading the cabinet, and remain closed until serving.

6) **TRANSPORTING HOT FOODS.** Your cabinet is equipped with a positive transportation latch to assure safety during transportation. Before moving the cabinet, keep it plugged in and wait until the amber cycling light goes off. This recovery takes only a short time, and allows the internal temperature to again reach the setting you have selected. As soon as the cycling light goes off, unplug the cabinet and wheel to serving area. Plug the cabinet into an electrical outlet at the serving location (if available), so that the thermostat will re-activate and automatically hold your pre-selected temperature.

# CABINET CAPACITIES AND DIMENSIONS

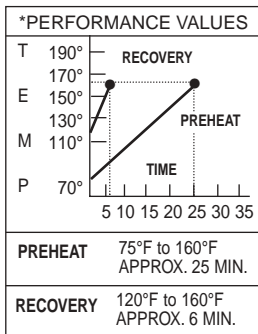
## 18" x 26" Trays (Standard), Various Size Trays and Pans (Universal)

### "MT SERIES"

MODEL NUMBER	CAPACITIES: 4.5" Spacings are Standard [A]				TRAY SLIDES PROVIDED @ 4.5" SPACINGS	TRAY SLIDES @ 3" SPACINGS OPTIONAL <i>(Additional slides required)</i>	OVERALL EXTERIOR DIMENSIONS IN. (mm)			NO. OF DOORS	CASTER SIZE	SHIP WT. LBS. (KG)
	NUMBER OF TRAYS [B]		CLASS 100									
	18 x 26 12 x 20 @ 4.5" @ 3"	14 x 18 @ 4.5" @ 3"	HIGH "H"	DEEP "D"			WIDE "W"					
MT-1826-7	5 7	10 14	5 pr	7 pr (2 pr)	36" (914)	31" (787)	26.5" (673)	1	5"	185 (84)		
MT-1826-15	10 15	20 30	10 pr	15 pr (5 pr)	60" (1524)	31" (787)	26.5" (673)	1	5"	255 (116)		
MT-1826-18	12 18	24 36	12 pr	18 pr (6 pr)	69" (1753)	31" (787)	26.5" (673)	1	5"	290 (132)		

[A] Tray-slides accommodate: (1) 18" x 26", (2) 14" x 18", (1) 12" x 20" trays and / or pans.

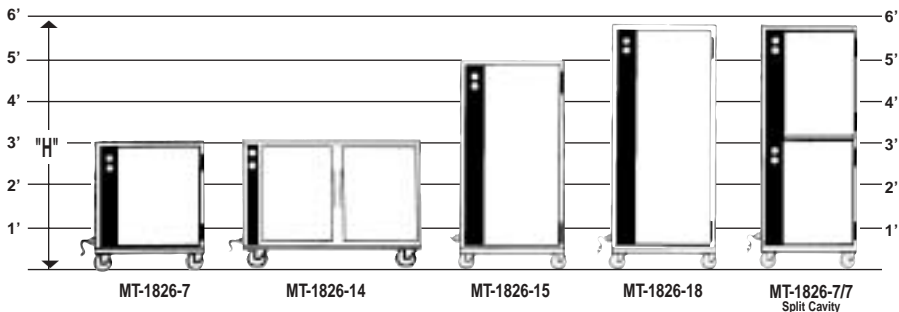
[B] Uprights punched on 1-1/2" centers. Tray-slides are adjustable.



\* Values are for largest model listed.

ELECTRICAL DATA		MT-1826-7/7 Split Cavity
VOLTS	120	120
WATTS	1650	2300
AMPS	13.75	19.2
HERTZ	60	60
PHASE	Single	Single
NEMA PLUG	5-15P	5-20P

Dedicated circuit only.



# MODEL DESCRIPTIONS

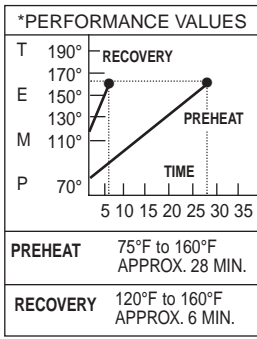
## 18" x 26" Trays (Standard), Various Size Trays and Pans (Universal)

### "MTU SERIES"

MODEL NUMBER	CAPACITIES : 4.5" SPACING STANDARD [A]				TRAY/PAN SLIDES PROVIDED @ 4.5" SPACINGS	TRAY/PAN SLIDES @ 3" SPACINGS OPTIONAL (Additional slides required)	OVERALL EXTERIOR DIMENSIONS IN.			CLASS 100		
	NUMBER OF TRAYS / PANS [B]						HIGH "H"	DEEP "D"	WIDE "W"	NO. OF DOORS	CASTER SIZE	SHIP WT. LBS. (KG)
	18 x 26 GN 2/1 @ 4.5"		12 x 20 @ 4.5" @ 3"									
MTU-4	4	6	8	12	4 pr	6 pr (2 pr)	33" (838)	31" (787)	29" (737)	1	5"	164 (74)
MTU-10	10	15	20	30	10 pr	15 pr (5 pr)	60" (1524)	31" (787)	29" (737)	1	5"	220 (100)
MTU-12	12	17	24	34	12 pr	17 pr (5 pr)	69" (1753)	31" (787)	29" (737)	1	5"	290 (132)
MTU-12D Dutch Doors	12	17	24	34	12 pr	17 pr (5 pr)	69" (1753)	31" (787)	29" (737)	2 Half Doors	5"	295 (134)

[A] Universal Tray-slides accommodate (1) 18" x 26", (2) 14" x 18", (2) 12" x 20", (2) 12" x 18", (1) 20" x 22", (2) 10" x 20", (1) GN 2/1 trays / pans. Number of tray-slides are listed above. Standard spacings are 4.5".

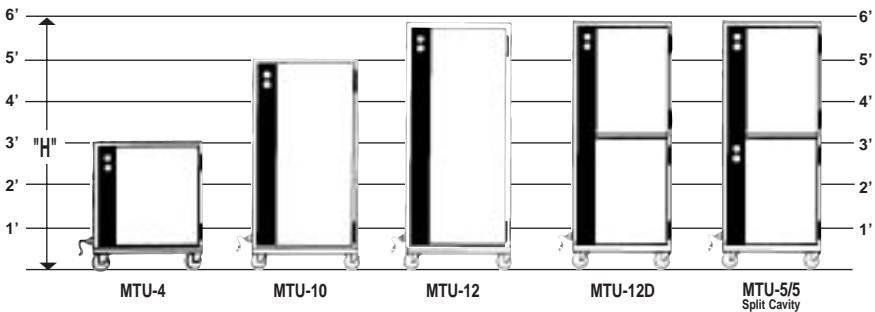
[B] Uprights punched on 1-1/2" centers. Tray-slides are adjustable. Number of tray-slides are listed above. Standard spacings are 4.5".



\* Values are for largest model listed.

ELECTRICAL DATA		MTU-5/5 Split Cavity
VOLTS	120	120
WATTS	1650	2300
AMPS	13.75	19.2
HERTZ	60	60
PHASE	Single	Single
NEMA PLUG	5-15P	5-20P

Dedicated circuit required.



### **FOOD SAFETY & COOKING**

Most foods are at risk during preparation and service. As foods are thawed, cooked, held, served, cooled and reheated, they may pass several times through the **temperature danger zone** of 40°F to 140°F (4.4°C to 60°C). Each time food is handled, it runs the risk of cross-contamination from other food and from food-contact surfaces, such as: human hands, cutting boards, and utensils. It is recommended that passing through the 40°F to 140°F (4.4°C to 60°C) zone be done as quickly and infrequently as possible.

### **THE FOUR HOUR RULE**

The **temperature danger zone** is considered 40°F to 140°F (4.4°C to 60°C) and **rapid bacteria growth zone** is considered 70°F to 120°F (21°C to 49°C). Prevent potentially hazardous foods from spending more than four (4) hours combined total time in these zones. The exposure time is accumulative from time of receiving products until time it is cooked. Exposure time begins again when food is fully cooked, held, served, cooled, and reheated. **FOOD SHOULD NEVER BE REHEATED TWICE!**

### **FOOD SAFETY**

Food and public health dangers can be avoided with proper food handling, storage, cooking (rethermalizing) and holding methods. The key to foodborne illness prevention is constant monitoring of food temperatures (both storage and internal).

### **PROPER FOOD HANDLING - HACCP OVERVIEW**

HACCP is a Food Safety Program that is an effective tool for safety and quality of food, from processing, receiving, storage, cooking, holding and serving. By definition, HACCP is:

**“HAZARD ANALYSIS CRITICAL CONTROL POINT.”**

# TROUBLE-SHOOTING CHART

**Check this list first before you call for service...**

PROBLEM	POSSIBLE CAUSE	REMEDY
<b>TEMP TOO HOT</b>	1A] Adjustable thermostat set too high 1B] Thermostat needs re-calibrating**	1A] Set thermostat at a lower temperature (no lower than 140°F). 1B] Loosen screw in thermostat knob and remove knob. Adjust set screw in hollow stem with small blade screwdriver by turning <u>CLOCK-WISE</u> . 1/4 turn lowers temperature approximately 10°F. DO NOT REMOVE SET SCREW.
<b>TEMP NOT HOT ENOUGH</b>	2A] Opening door unnecessarily 2B] Thermostat set too low 2C] Cord plug pulled out from outlet 2D] Fuse blown - no power to outlet 2E] Thermostat out of calibration**	2A] Keep door closed and latched shut as much as possible. 2B] Set thermostat at a higher temperature. 2C] Replug cord into proper outlet. 2D] Have a qualified electrician check power and fuse box. 2E] Loosen set screw in thermostat knob and remove knob. Adjust set screw in hollow stem with small blade screwdriver by turning <u>COUNTER-CLOCKWISE</u> . 1/4 turn raises temperature approximately 10°F. DO NOT REMOVE SET SCREW.
<b>NO HEAT AT ALL</b>	3A] Cabinet not plugged into outlet 3B] Thermostat knob at " OFF "  3C] Rocker switch at " OFF " position 3D] Fuse Blown - no power to outlet  3E] Thermostat needs replacing  3F] Heating element burned out*	3A] Plug cabinet into properly grounded electrical outlet. 3B] Adjust thermostat knob to temperature setting required. 3C] Turn switch to " ON " position. 3D] Have a qualified electrician check power to fuse box. 3E] Unplug cabinet from electrical source. Loosen set screw in thermostat knob and remove knob. Remove control panel, disconnect wires from terminals on thermostat, and remove 2 screws holding thermostat to control panel. Replace thermostat with new one, and re-install control panel and thermostat knob. 3F] Unplug cart from electrical source. Remove screws holding heating element in place. Gently pull element away from back wall a few inches to expose wire connections. Disconnect wires, and replace element with new one. Reconnect wires, secure element with screws.

\* \* NOTE: CALIBRATION IS EXCLUDED FROM FWE WARRANTY. Thermostats on all units are calibrated at the factory prior to shipping. Due to conditions in transit, beyond our control, occasionally units will need to be re-calibrated prior to use. This is a simple procedure for which instructions are given above. (1B, 2E)

\* Heating element will either function or not function. Only a slight warmth indicates a problem with the thermostat, not the element.

# ***PARTS LIST***

***FIVE PARTS DEPARTMENT: 815 459 7500***

## **CASTERS**

5" rigid  
5" swivel with brake

## **PART NUMBER**

CSTR 5 R-2  
CSTR 5 SB-2

## **HARDWARE**

Door hinge, edgemount  
Door hinge, lift-off, pair  
Door Latch, edgemount, non-locking  
Door Latch, edgemount, locking  
Door Latch, paddle type  
Push handle, aluminum, 12.5"  
Spacers for push handles  
Bolts, hex head for handles  
Door gasket (by the foot)  
Bumper insert, black vinyl

HNG-214  
HNG L/O  
LTH DR  
LTH DR LK  
LTH PDL  
HDL 12.5 AL  
SPCR125X.330  
B1/4-20x32NZ  
GSKT DR  
BMPIR INSERT

## **ELECTRICAL COMPONENTS**

Pilot light, white & amber, rectangle  
On-Off switch, lighted  
Thermostat  
Humidity control  
Thermometer  
Knob for thermostat and humidity control  
Extension Cord, 10 ft. -115v  
Heating element, 1250w/115v  
Moisture element, 350w/115v  
Blower Motor, 115v  
Fan blade, 3", aluminum

LT PLT W/A  
SWH RCK LE1  
T-STAT H1  
T-STAT INFI  
T-METER H1  
KNB H6  
CRDSET 10/115  
EL1250/115HT  
EL350/115PH  
MTR JK120 92  
FAN BLD 4.5B

## **TRAY SLIDES**

A terrific convenience! FWE rod-style slides and stainless steel uprights are both removable for easy loading, unloading and deep-down sanitary cleaning. Slides give bottom support - prevents tray fall-out.

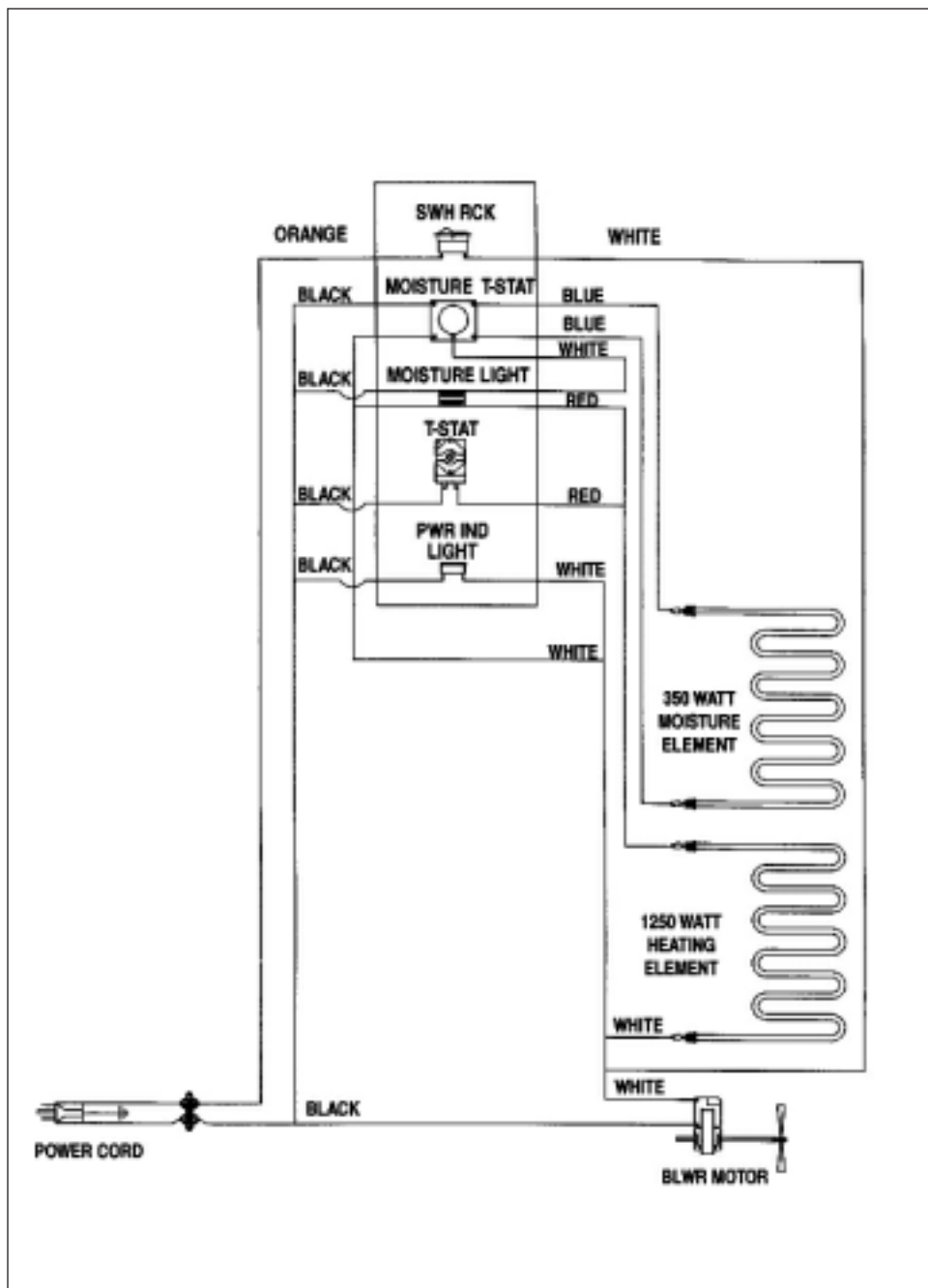
Tray slides, pair (MT-1826 models)  
Tray slides, pair (MTU models)

SLD TSU245  
SLD UHS245



# FWE MOISTURE-TEMP CABINETS

## WIRING DIAGRAM



# **FWE MOISTURE-TEMP CABINETS**

## **LIMITED TWO YEAR WARRANTY**

**FWE / Food Warming Equipment Company, Inc.** (Seller) warrants to the original purchaser, subject to the exceptions and conditions below, that FWE manufactured equipment shall be free from defects in material or factory workmanship, under ordinary use for the purpose for which it is designed. The effective warranty period is as follows:

**PARTS:** Seller will furnish without charge to the original purchaser, FOB Sellers' factory, replacement parts for repairs to all new standard catalog products and factory custom / modified units, which in Seller's sole judgement, prove defective in materials or workmanship under normal and proper use with the reserved right to request the return of any part claimed to be defective, prior to issuing replacement part or authorizing warranty service, for a period of two (2) years from date of original shipment from Seller's plant, *except for equipment used in a **Correctional Environment / Facilities**, which is warranted for a period of one (1) year from date of original shipment from Seller's plant.*

**LABOR:** Seller's labor warranty shall be performed by a Seller-approved Service Agency who must contact Seller to obtain a Warranty Service Authorization (WSA) number prior to performing any repairs. If service is required during overtime periods, the difference between overtime and standard labor rates shall be paid by the purchaser. Seller does not assume any responsibility for any charges not expressly authorized, incidental to the repair or replacement of equipment covered by this warranty, nor charges exceeding, in Sellers sole judgement, normal and customary amounts. Only approved travel charges will be allowed. Seller's labor warranty shall be from the date of original shipment date from Seller's plant for a period of one (1) year, *except for equipment used in a **Correctional Environment / Facilities** which is warranted for a period of six (6) months.*

This warranty is for normal usage and does not apply to any product or parts thereof that have been misused, altered, or where Seller's operating instructions or specific voltage is not observed; nor shall this warranty apply to defective products or parts resulting from accident following date of original shipment, nor extend to or cover removal, installation, reinstallation or calibration, or service calls or cost of repairs undertaken by a customer. This warranty is also subject to the following:

- 1.] Customer returning the warranty registration card, accompanying Sellers original shipment, to Seller within thirty (30) days of receipt;
- 2.] Giving immediate notice of any allegedly defective part or product to Seller; and
- 3.] Customer, at Sellers request, returning said defective parts or product to Seller.

This is the sole warranty applicable to the merchandise. It is expressly understood that Seller's liability hereunder is limited to the repair or replacement, at Seller's option, of products or parts, defective materials or workmanship as provided above. Seller's judgement as to the cause and nature of any defect will be final. Seller shall in no case be responsible for special or consequential damages or any other obligation or liability with respect to products sold by Seller.

This warranty, as stated above, applies to equipment installed in the Continental United States. FWE equipment installed outside the Continental United States shall carry parts coverage only. All labor costs are approved on a discretionary basis, based on like repairs in the Continental U.S. This warranty shall stand in whole or in part as allowed by law. Any exclusion of a part of this warranty, as may be allowed by law, shall not void balance of warranty.

The best designed . . .  
The best built . . .  
The best performing units on the market!



- ◇ Retherm Cabinets
- ◇ Self-Propelled Transports
- ◇ Heated Banquet Cabinets
- ◇ Universal Bulk Food Cabinets



- ◇ Utility Carts
- ◇ Refrigerators, Freezers and Convertibles
- ◇ Prisoner & Correctional Tray Delivery



- ◇ Hospital Tray Delivery Carts
- ◇ Portable Bars and Back-ups



**WE OFFER SALES AND SERVICE WORLDWIDE**

Food Warming Equipment Company, Inc.

P.O. Box 1001

Crystal Lake, IL 60039-1001

**Manufacturing Facilities:**

7900 S. Route 31

Crystal Lake, IL 60014

**FWE Parts Department:**

815 459 7500

Errors subject to correction. All specifications  
subject to change without notice.  
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**FAX:**

815 459 7989